

Remarks

The Office Action dated October 27, 2003 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-9 and 11-31 are pending in this application. Claims 1-9 and 11-31 stand rejected.

In accordance with 37 C.F.R. 1.136(a), a one month extension of time is submitted herewith to extend the due date of the response to the Office Action dated October 27, 2003, for the above-identified patent application from January 27, 2004, through and including February 27, 2004. In accordance with 37 C.F.R. 1.17(a), authorization to charge a deposit account in the amount of \$110.00 to cover this extension of time request also is submitted herewith.

The rejection of Claims 1, 3-6, 11, 14, 15, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (US 5,817,958) in view of Ikeda et al. (US 2001/0056335-A1) and further in view of Miyazaki et al. (US 6,487,518) is respectfully traversed.

Uchida et al. describe a plant monitoring and diagnosing method that includes detecting and accumulating plant operating conditions, apparatus operating conditions and environment conditions, inputting and accumulating plant inspection data, and monitoring and diagnosing plant conditions based on plant record information including the accumulated detection data and inspection data. The plant record information is stored in the form of a plant chart in which the detection data and the inspection data are compressed and accumulated such as a personal clinical chart, and the plant conditions are diagnosed based on the data in the plant chart. Current plant conditions are predicted in accordance with the data in the plant chart and a plant condition predicting model, and an abnormality in the plant conditions are monitored and

diagnosed based on a comparison between the predicted current plant conditions and the current detection data. When an abnormality is detected as a result of diagnosing the plant conditions, an abnormal location and an abnormal item are identified and events which will ensue from the abnormality are predicted. Also, a residual life for each plant component, apparatus and member is evaluated based on the data in the plant chart and material degradation data calculated from the chart data.

Ikeda et al. describe a remote monitoring diagnostic system that includes a data storage file used to collect plant data representing the operation status of a plant and to store the plant data, a monitoring system to monitor the field plant according to the collected plant data, a database storing the past plant data associated with errors having occurred to the plant and actions taken to cope with the errors. The monitoring system also includes a diagnostic system to analyze the plant data sent to the database, and a reporting system to send a report to the user of the plant regarding the causes for the error and/or actions taken to cope with the error based on the result of the analysis. Ikeda et al. do not describe nor suggest managing inspection requirements. Rather, Ikeda et al. describe a monitoring system that continuously monitors a process.

Miyazaki et al. describe a thickness reducing management system for pipes in a pipe line that includes a pipe thickness measurement result data base unit which stores pipe thickness measurement results for respective measurement points performed during inspection of the pipe lines; a point pipe thickness reducing speed calculation unit which calculates a measurement pipe thickness reducing speed; a pipe line condition measurement unit which is includes by a first measurement subunit for measuring pipe line temperature or fluid temperature inside the pipe

lines, a second measurement subunit for measuring wetness of the fluid in the pipe lines and a third measurement subunit for measuring fluid speed in the pipe lines; a pipe line condition data base unit which stores pipe line condition data from the pipe line condition measurement unit; a pipe thickness reducing speed model formula constructing unit which constructs a mathematical formula expressing pipe thickness reducing speed using the measurement results and by making use of maximum values of the measurement pipe thickness reducing speed calculated by the point pipe thickness reducing speed calculation unit; a maximum pipe thickness reducing speed calculation unit which calculates a maximum pipe thickness reducing speed; a next inspection interval calculation unit which determines an inspection interval until next time for the pipe lines through calculation of an interval when the pipe thickness of the pipe lines reaches a predetermined pipe thickness to be inspected by making use of the maximum pipe thickness reducing speed from the maximum pipe thickness reducing speed calculation unit and the predetermined pipe thickness to be inspected; and a pipe thickness measurement annual plan and schedule preparing unit which prepares a pipe thickness measurement annual plan and schedule based on the inspection interval until the next time inspection. Miyazaki et al. does not describe nor suggest developing a schedule of future inspection requirements sortable by inspection date, component, inspection criteria satisfaction, and defect indication.

Claim 1 of the present application recites method for managing inspection requirements that includes receiving information relating to components in a plant, storing the information into the centralized database, cross-referencing the information received, updating the centralized database based on the information received modifying inspection requirements based on inspection result information, determining next required inspection of each plant component,

developing a schedule of future inspection requirements sortable by inspection date, component, inspection criteria satisfaction, and defect indication, notifying a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results, and providing information in response to an inquiry including information relating to component identification, component description, inspection type, last inspection date, inspection criteria result, defect indication, inspection comments, next required inspection, and a basis for the next required inspection.

Uchida et al., Ikeda et al., and Miyazaki et al., alone or in combination, do not describe nor suggest a method as recited in Claim 1. Particularly, Uchida et al., Ikeda et al., and Miyazaki et al., alone or in combination, do not describe nor suggest a method that includes determining the next required inspection of each plant component, developing a schedule of future inspection requirements sortable by inspection date, component, inspection criteria satisfaction, and defect indication, notifying a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results, and providing information in response to an inquiry including information relating to component identification, component description, inspection type, last inspection date, inspection criteria result, defect indication, inspection comments, next required inspection, and a basis for the next required inspection.

Rather, Uchida et al. describe a plant monitoring and diagnosing method that includes detecting and accumulating plant operating conditions, apparatus operating conditions and environment conditions, inputting and accumulating plant inspection data, and monitoring

and diagnosing plant conditions based on plant record information including the accumulated detection data and inspection data. The Office Action, at page 3, admits that "Uchida also does not specifically disclose modifying the next required inspection of each plant component based upon inspection result information to provide a sortable schedule of future inspection requirements". Ikeda et al. only describe a monitoring system that continuously monitors a process and do not describe nor suggest managing inspection requirements.

Miyazaki et al. teach calculating a next inspection interval based on the present inspection data. However, Miyazaki et al. do not describe nor suggest developing a schedule of future inspection requirements sortable by inspection date, component, inspection criteria satisfaction, and defect indication, notifying a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results, and providing information in response to an inquiry including information relating to component identification, component description, inspection type, last inspection date, inspection criteria result, defect indication, inspection comments, next required inspection, and a basis for the next required inspection. The Office Action, at page 5, suggests that Miyazaki et al. teaches "a schedule of future inspection requirements able to be arranged (i.e. sortable) by criteria satisfaction with respect to the specific components". Applicants disagree with this suggestion because Miyazaki et al. describes at Col. 8, lines 42-45, that "By arranging these next inspection intervals and remaining lifes of all of the inspection object pipe lines in the plant the pipe thickness measurement annual plan and schedule is prepared." Applicants submit that this description by Miyazaki et al. is not a description of a schedule of future inspection requirements sortable by

inspection date, component, inspection criteria satisfaction, and defect indication. Miyazaki et al. do not describe nor suggest that their schedule is sortable by inspection date, component, inspection criteria satisfaction, and defect indication. Accordingly, Applicants submit that Claim 1 is patentable over Uchida et al., Ikeda et al., and Miyazaki et al., alone or in combination.

Claims 3-6, 11, 14, 15, and 17 depend from independent Claim 1. When the recitations of dependent Claims 3-6, 11, 14, 15, and 17 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 3-6, 11, 14, 15, and 17 likewise are patentable over Uchida et al., Ikeda et al., and Miyazaki et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 1, 3-6, 11, 14, 15, and 17 be withdrawn.

The rejection of Claims 2, 7-9, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (US 5,817,958) in view of Ikeda et al. (US 2001/0056335-A1), further in view of Miyazaki et al. (US 6,487,518), and still further in view of Klinvex (US 4,642,215) is respectfully traversed.

As explained above, Claim 1 is submitted to be patentable over Uchida et al., Ikeda et al., and Miyazaki et al., alone or in combination.

Klinvex et al. describe a universal tool for ultrasonic testing of tubular objects such as nuclear reactor vessels. The tool includes an array of transducers mounted in groups for common inspection of a particular weld volume. The individual transducers, as well as the groups, are arranged in a compact assembly for minimizing the overall dimensions of the tool and its corresponding weight. The transducers are arranged in a manner which permits inspection of tubular objects having different radii of curvature and corresponding different

diameters with a single tool without the need of having to individually adjust the orientation angles of the transducers. Klinvex et al. do not describe nor suggest a method for managing inspection requirements.

Uchida et al., Ikeda et al., Miyazaki et al., and Klinvex et al., alone or in combination, do not describe nor suggest a method as recited in Claim 1. Particularly, Uchida et al., Ikeda et al., Miyazaki et al., and Klinvex et al., alone or in combination, do not describe nor suggest a method that includes determining the next required inspection of each plant component, developing a schedule of future inspection requirements sortable by inspection date, component, inspection criteria satisfaction, and defect indication, notifying a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results, and providing information in response to an inquiry including information relating to component identification, component description, inspection type, last inspection date, inspection criteria result, defect indication, inspection comments, next required inspection, and a basis for the next required inspection. Specifically, Klinvex et al. do not describe nor suggest any method for managing inspection requirements. Particularly, Klinvex et al. do not describe nor suggest developing a schedule of future inspection requirements sortable by inspection date, component, inspection criteria satisfaction, and defect indication. Accordingly, Applicants submit that Claim 1 is patentable over Uchida et al., Ikeda et al., Miyazaki et al., and Klinvex et al., alone or in combination.

Claims 2, 7-9, and 16 depend from independent Claim 1. When the recitations of dependent Claims 2, 7-9, and 16 are considered in combination with the recitations of Claim 1,

Applicants respectfully submit that Claims 2, 7-9, and 16 likewise are patentable over Uchida et al., Ikeda et al., Miyazaki et al., and Klinvex et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 2, 7-9, and 16 be withdrawn.

The rejection of Claims 12, 13, 18-20, 22, and 24-27 under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (US 5,817,958) in view of Ikeda et al. (US 2001/0056335-A1), further in view of Miyazaki et al. (US 6,487,518), and still further in view of Eryurek et al. (US 2002/0123864-A1) is respectfully traversed.

As explained above, Claim 1 is submitted to be patentable over Uchida et al., Ikeda et al., and Miyazaki et al., alone or in combination.

Eryurek et al. describe a system and method for analyzing a process that includes collecting process data within a process control plant, transmitting the collected process data to a remote data processing facility, analyzing the process data within the remote data processing facility to generate analysis data using one of a plurality asset or process analysis tools stored within a database of the remote data processing facility, and transmitting the analysis data to the process control plant. Eryurek et al. do not describe nor suggest any method for managing inspection requirements.

Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination, do not describe nor suggest a method as recited in Claim 1. Particularly, Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination, do not describe nor suggest a method that includes determining the next required inspection of each plant component, providing a schedule of future inspection requirements sortable by at least one of date, component, criteria

satisfaction, and defect indication, and notifying a user of events affecting the inspection schedule. Specifically, Eryurek et al. do not describe nor suggest any method for managing inspection requirements. Accordingly, Applicants submit that Claim 1 is patentable over Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination.

Claims 12 and 13 depend from independent Claim 1. When the recitations of dependent Claims 12 and 13 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 12 and 13 likewise are patentable over Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination.

Claim 18 of the present application recites a network-based system for managing inspection requirements that includes a client system comprising a browser, a data storage device for storing information, and a server system configured to be coupled to the client system and the database. The server system is further configured to determine next required inspection of each plant component based on the inspection result information and regulatory requirements, cross-reference the information received against the components, provide a schedule of future inspection requirements sortable by inspection date, component, inspection criteria satisfaction, and defect indication, notify a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results, and provide information in response to an inquiry including information relating to component identification, component description, inspection type, last inspection date, inspection criteria result, defect indication, inspection comments, next required inspection, and a basis for the next required inspection.

Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination, do not describe nor suggest a system as recited in Claim 18. Particularly, and for the reasons explained above, Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination, do not describe nor suggest a system that includes a server system that is configured to modify inspection requirements based upon inspection result information, determine next required inspection of each plant component, cross-reference the information received against the components, provide a schedule of future inspection requirements sortable by date, component, criteria satisfaction, and defect indication, notify a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results, and provide information in response to an inquiry. Accordingly, Applicants submit that Claim 18 is patentable over Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination.

Claims 19-20, 22, and 24-27 depend from independent Claim 18. When the recitations of dependent Claims 19-20, 22, and 24-27 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 19-20, 22, and 24-27 likewise are patentable over Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 12, 13, 18-20, 22, and 24-27 be withdrawn.

The rejection of Claims 21, 23, and 28-31 under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. (US 5,817,958) in view of Ikeda et al. (US 2001/0056335-A1), Miyazaki et al.

(US 6,487,518), and of Eryurek et al. (US 2002/0123864-A1) and further in view of Klinvex et al. (US 4,642,215) is respectfully traversed.

As explained above, Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination, do not describe nor suggest a system that includes a server system that is configured to modify inspection requirements based upon inspection result information, determine next required inspection of each plant component, cross-reference the information received against the components, provide a schedule of future inspection requirements sortable by date, component, criteria satisfaction, and defect indication, notify a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results, and provide information in response to an inquiry. Accordingly, Applicants submit that Claim 18 is patentable over Uchida et al., Ikeda et al., Miyazaki et al., and Eryurek et al., alone or in combination.

Klinvex et al. do not describe nor suggest a server system. Rather, Klinvex et al. describe a universal tool for ultrasonic testing of tubular objects such as nuclear reactor vessels. Accordingly, Applicants submit that Claim 18 is patentable over Uchida et al., Ikeda et al., Miyazaki et al., Eryurek et al., and Klinvex et al., alone or in combination.

Claims 21 and 23 depend from independent Claim 18. When the recitations of dependent Claims 21 and 23 are considered in combination with the recitations of Claim 18, Applicants respectfully submit that Claims 21 and 23 likewise are patentable over Uchida et al., Ikeda et al., Miyazaki et al., Eryurek et al., and Klinvex et al., alone or in combination.

Claim 28 of the present application recites a computer program embodied on a computer readable medium for managing inspection requirements. The program includes a code segment that receives information relating to components including inspection regulations and inspection results, a code segment that maintains a database by adding, deleting and updating information relating to components, a code segment that generates inspection requirements based on the information relating to components, a code segment that determines next required inspection of each plant component based on inspection results information and regulatory requirements, a code segment that provides a schedule of future inspection requirements sortable by at least one of inspection date, component, inspection criteria satisfaction, and defect indication, a code segment that notifies a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results; and a code segment that provides information to be displayed on a user system including information relating to component identification, component description, inspection type, last inspection date, inspection criteria result, defect indication, inspection comments, next required inspection, and a basis for the next required inspection.

Uchida et al., Ikeda et al., Miyazaki et al., Eryurek et al., and Klinvex et al., alone or in combination, do not describe nor suggest a computer program embodied on a computer readable medium for managing inspection requirements. Particularly, and at least for the reasons explained above, Uchida et al., Ikeda et al., Miyazaki et al., Eryurek et al., and Klinvex et al., alone or in combination, do not describe nor suggest a computer program that includes a code segment that generates inspection requirements based on the information

relating to components, a code segment that determines next required inspection of each plant component based on inspection results information and regulatory requirements, a code segment that provides a schedule of future inspection requirements sortable by at least one of inspection date, component, inspection criteria satisfaction, and defect indication, a code segment that notifies a user of events affecting the inspection schedule, including at least one of updated inspection guidelines, revised industry component findings, component manufacturer safety information alerts, and inspection results; and a code segment that provides information to be displayed on a user system including information relating to component identification, component description, inspection type, last inspection date, inspection criteria result, defect indication, inspection comments, next required inspection, and a basis for the next required inspection. Accordingly, Applicants submit that Claim 28 is patentable over Uchida et al., Ikeda et al., Miyazaki et al., Eryurek et al., and Klinvex et al., alone or in combination.

Claims 29-31 depend from independent Claim 28. When the recitations of dependent Claims 29-31 are considered in combination with the recitations of Claim 28, Applicants respectfully submit that Claims 29-31 likewise are patentable over Uchida et al., Ikeda et al., Miyazaki et al., Eryurek et al., and Klinvex et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 21, 23, and 28-31 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully

solicited.

Respectfully submitted,

  
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